ARD-RAISE

Proceedings of the Workshop on Comparative Economic Advantage in Agricultural Trade and Production (Malawi)

Sun 'n' Sand Holiday Resort, Mangochi, August 24-25, 2000

Prepared by

James W. Banda
Munday S. Makoko

University of Malawi
Agricultural Policy Research Unit (APRU)
Bunda College of Agriculture

Presented to
REDSO/ESA
under the Rural and Agricultural Incomes with a Sustainable Environment (RAISE)
Contract No. PCE-I-00-99-00001-00
Regional Trade Analytical Agenda
Implemented by TechnoServe-Kenya and ARD, Inc.

ARD-RAISE Consortium
1601 North Kent St., Suite 800
Arlington, VA 22209
Tel: 703-807-5700, Fax: 703-807-0889
gkerr@ardinc.com

The ARD-RAISE Consortium:
ARD, Inc., Cargill Technical Services,
Associates for International Resources and Development, CARANA Corporation,
A.P. Gross & Company, International Programs Consortium, Land O' Lakes,
Purdue University, and TechnoServe

TABLE OF CONTENTS

APPENDICES

ACRONYMS AND ABBREVIATIONS

ADD	Area Development District
ALDSAP	Agricultural Strategy and Action Plan
APRU	Agricultural Policy Research Unit
BTA	Bilateral Trade Agreement
CEA	Comparative Economic Advantage
DAHI	Department of Animal Health and Industry
DRC	Domestic Resource Cost
DWS	David Whitehead and Sons
FAO	Food and Agriculture Organization of the United Nations
GDP	Gross Domestic Product
ICBT	Informal Cross-Border Trade
MCI	Ministry of Commerce and Industry
MDI	Malawi Dairy Industry
MoAI	Ministry of Agriculture and Irrigation
NPC	Nominal Protection Coefficient
NRA	National Road Agency
PAM	Policy Analysis Matrix
PIAM	Poultry Industry and Association of Malawi
RCR	Resource Cost Ratio
SADC	Southern Africa Development Community
UNDP	United Nations Development Program
US	United States
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

This workshop was organized with the view to create awareness among policymakers, planners, and institutions about the potential crop and livestock commodities in which Malawi has a comparative advantage and the constraints affecting the production of such commodities. In addition, the workshop provided a forum for stakeholders to assess progress on the informal cross-border trade (ICBT) recommendations.

Major Findings

Informal Cross-Border Trade

It was noted that although some efforts had been made to implement some of the recommendations, no action has been taken on most. There were problems of communication and consultations.

Agricultural Comparative Economic Advantage

Malawi has a strong comparative economic advantage (CEA) in the production of tobacco, paprika, macadamia nuts, cotton, tea, Phaseolus beans, groundnuts and hybrid maize, but not in soy beans and local maize. The CEA for livestock was strong for dairy cattle and poultry. Other livestock species were not studied.

Recommendations

Crops

- Private sector (local) to be involved in input procurement and supply.
- Establish business information bureau.
- Develop Rural Road Network Development and Maintenance master plan.
- Establish cooling center and vending spaces.
- Promote value adding for crops with high CEA.
- Harmonize policies within the region with respect to food security.
- Promote alternatives such as rice, cassava, cotton, sugar, pigeon peas, groundnuts, and horticultural crops and beans (diversification).
- Market strategy of subleasing land profitably.

Livestock

- Intensify extension in livestock production.
- Intensify management and establishment of pastures/feed resources.
- Establish credit programs to support acquisition and multiplication of livestock.
- Remove duties and surtax on feed ingredients and equipment.
- Encourage private sector participation in the livestock industry.
- Engage hatcheries and value-adding facilities in livestock products.
- Encourage, expand, and support local feed manufacturing industry.

- Remove surtax to encourage production.

Additionally, there were the following recommendations for livestock:

- Conduct further in-depth research on CEA on all livestock species in all agro-ecological zones and production systems.
- A drastic change in institutional leadership is needed in the livestock industry.
- APRU, in collaboration with Animal Science Department at Bunda College, should take up the initiatives recommended here with the appropriate officials.
- Provide proper guidance in the privatization of the livestock industry.
- Special credit facilities should be established to assist farmers and the private sector to participate in livestock production and product value adding.

CHAPTER 1.
BACKGROUND

USAID missions in the east and southern Africa region, in collaboration with national institutions and researchers in selected countries, decided to facilitate the analysis of the impact of evolving trade and agricultural policies on agricultural productivity and food security in the region. The aim was to generate policy relevant data that would facilitate appropriate policy responses in these fields.

The Agricultural Policy Research Unit (APRU) at the Bunda College of Agriculture in the University of Malawi was among the institutions that conducted some of the studies. APRU carried out two major studies:

- informal cross-border trade (ICBT) in Malawi, and
- comparative economic advantage (CEA) in agricultural trade and production in Malawi.

Both studies were completed and reports prepared by 1998. The CEA study noted that Malawi has a comparative advantage in several commodities, yet the production of such commodities is still very low. This workshop was organized to create awareness among policymakers, planners, and institutions about the potential commodities in which Malawi has a comparative advantage and constraints affecting the production of such commodities. In addition, the workshop provided a forum for stakeholders to assess progress on the ICBT recommendations.

CHAPTER 2.
PARTICIPANTS

The workshop was attended by a total of twelve participants. Participants came from the University of Malawi, the private sector, the government, and the donor community. A list of the participants is shown in Appendix A.

CHAPTER 3.
OBJECTIVES OF THE WORKSHOP

The objectives of the workshop were to

- provide recommendations on crops and livestock products that enjoy comparative advantage;
- provide recommendations on farming activities which are most, or least, profitable;
- discuss how different enterprises compare with regard to labor requirements, production costs, and other characteristics of private and social importance;
- provide guidance on the plan of action to have the recommendations implemented; and
- identify institutions that should act as key players in the implementation of the recommendations.

CHAPTER 4.
WORKSHOP METHODOLOGY

As a matter of principle, the workshop methodology encouraged and promoted full participation of participants. The Director of APRU, Dr Charles Mataya, briefed participants on the objectives of the workshop and its expected outcomes. A presentation of the ICBT study recommendations and the main findings and recommendations of the CEA study followed this. Each presentation was followed by active plenary discussions. Participants were then divided into two groups, which discussed the issues and made recommendations based on the following set of terms of reference:

- Check all recommendations made in the documents regarding validity and make necessary changes to both crops and livestock.
- Assess which recommendations have been implemented or not. For those not implemented, what are the reasons and the way forward.
- Map out a plan of action and effective monitoring for each recommendation.

Each group then presented a report on their discussion in a plenary session. On the basis of this and the ensuing discussions, a plan of action for the implementation of the recommendations in the two studies was drawn and agreed upon.

CHAPTER 5.
SUMMARY OF STUDY REPORT PRESENTATIONS AND DISCUSSION

5.1 Presentation of the ICBT Recommendations – Dr Charles Mataya

Dr. Mataya presented recommendations of the ICBT consultative dinners held at Lilongwe and Capital Hotels, respectively in July, August, and December 1999, involving principal secretaries from key ministries (Commerce and Industry, Finance, and Agriculture); representatives of the Reserve Bank of Malawi; the donor community (UNDP and the World Bank); the Economics Association of Malawi; and the ICBT Technical Organizing Committee. The major purpose of this presentation was to find out what progress has been made on the recommendations since that time. The observations are presented below according to each recommendation made.

5.1.1 Major Comments, Recommendations, and the Way Forward

1. *Encouraging value adding on products (agro-processing):* Efforts have been made to add value through formation of cooperatives and associations, but there is a skills gap in processing and value adding. This can be improved through training and provision of information. There is also a need to evaluate the extent associations/cooperatives are engaged in value adding. MEPC should take action. There is a need to harmonize policies and strategies through publicity and consultative processes at the national level by forming a forum.

2. *Mistrust between government and traders:* There is now an association on ICBT. In addition, there are initiatives at the national and regional level to formalize ICBT through reduction of barriers and trade tariffs, but this should be followed up. APRU and NAHIBA should take the lead to see what associations are doing.

3. *Studying and learning from the Asian experience with growth triangles:* Some initiatives are noted on the recommendation.

4. *Standardizing data collection and capturing ICBT in national accounts/trade statistics*: NSO, Bunda College (APRU) and OXFAM should look into this. Most statistics do not bother with import trade. Data collection must consider including various routes to capture all trade.

5. *Regularizing and decriminalizing ICBT despite its foreseen implications for customs and the legislature of the country:* The workshop noted that there is now a cooperative/association on ICBT. APRU and NAHIBA should follow up on the activities of the association.

5.1.2 Issues Raised in Response to Recommendations

The workshop noted that some of the observations made on recommendations 1 through 5 above also hold for the following issues and so need not be repeated:

- formalizing ICBT,
- competitiveness in production and exporting of goods,

- effect of ICBT on the agriculture sector"s performance,
- lack of transparency and existence of mistrust between government and ICBT traders,
- policy harmonization,
- learning from growth triangles,
- export guarantee schemes,
- ICBT"s contribution to food security,
- use of Malawi Kwacha in ICBT,
- liberalization of trade and evasion of import duties, and
- establishment of cooperatives.

5.1.3 Recommendations and Strategies on the Way Forward

1. *Encouraging establishment of cooperatives:* The workshop noted that there is some progress on initiatives (passage of policy and act). However, there is need for follow up.

2. *Import/export company of Malawians:* Trading facilities, including processing machines, warehouses and other trade facilities need to be established along the borders to facilitate cross-border trade and transactions among countries. MIPA and MCCCI should take action.

3. *Export guarantee schemes:* There was one, but it was poorly administered and only few individuals benefited. There is a need for the private sector to address this. The cooperatives/associations can take care of the very small businesses.

4. *Malawi Kwacha currency use in ICBT:* Efforts by the formal and informal banking sectors should take note. Some efforts have been made.

5. *Competitiveness of Malawian products:* The study has been done and was reported in the workshop.

6. *Reducing tariffs to formalize ICBT:* There has been some tariff reductions. MRA has been established partly in pursuance of this.

7. *Learn from other countries' experience:* Participants agreed.

8. *Promoting export/investments through essay writing:* ECAMA and MEPC are conducting public seminars. These must continue on relevant topics, but should be done in a sustainable manner through cost recovery, etc.

6. *Guidance to liberalization:* MCCCI has been preparing papers to advise the government on how liberalization should proceed, but these have not been made public. This should be done with privatization as well. There should be a guided process and the private sector should take the lead.

5.2 Discussion and Recommendations on ICBT

During the discussion, questions came up as to what has happened since the last ICBT meeting. Since no follow up took place, it was strongly recommended that summaries of the ICBT discussions and CEA studies should be compiled and submitted to the Cabinet Committee on Economy for implementation of recommendations, with copies to the State President.

The workshop participants also recommended during the workshop, that institutions playing a role in implementing the recommendations should be identified for a proper follow up and monitoring.

The role of MIPA was discussed. MIPA is said to be crucial, unless there is capital instead of depending on donors. It was recommended that joint ventures should be adopted as promotional strategies for improvement in trade. The formation of associations and/cooperatives was important.

It was also noted that there are specific fora, such as those on the Southern Africa Development Community (SADC) Protocols, to harmonize policies and strategies through integration. However, the consultative process is lacking or inadequate. It was therefore recommended that a special forum should be formed to coordinate all the consultative processes.

5.3 Presentation of the Comparative Economic Advantage Study on Crops - Mr. Ted Nakhumwa

5.3.1 Objectives

The general objective was to investigate CEA in agricultural production and trade — part of trade studies in the SADC. Recognizing the existence of discrepancies between market and social prices, the study was designed to achieve the following objectives:

- evaluate CEA in various agro-ecological zones, technological level, land tenure;
- analyze the impact of removing distorting policies on the efficiency on resource use; and
- identify areas of policy, technology, and institutional intervention.

5.3.2 Methods and Analytical Framework

The Policy Analysis Matrix (PAM) was used to determine the CEA of the various major crops grown in Malawi. The PAM is a product of two accounting identities where the first defines profitability (revenue-cost) while the second measures the effects of government interventions or divergences. For ease of interpretation, the Resource Cost Ratio (RCR) was the variable used to compare the CEA of the various crops.

Three central market nodes of Nacala were used as entry and exit ports. These were Blantyre (740 km to Nacala), Lilongwe (1051 km to Nacala) and Mzuzu (1448 km to Nacala). An RCR of less that 1 indicates that the value of resources used in production is less than the value of

foreign exchange earned or saved (CEA). That of more than 1 indicates the reverse and hence no comparative advantage.

5.3.3 Results and Discussions

Results indicated that by using Nacala as an outlet, area development districts (ADDs) in the north face high transport costs. The following sections present results of CEA of the various major crops studied.

5.3.3.1 Comparative Economic Advantage by Crop

Tobacco
Tobacco had a RCR of 0.23-0.32 in the high input system in seven ADDs, except for Ngabu, which had a RCR value of 0.88. The gross margins were around US $2,300 per ha. The RCR on smallholder farms was 0.22-0.32 with a gross margin of US $1600 per ha. It was concluded that smallholders are as efficient in resource use as the estates.

Tea (second export crop)
The crop is confined to medium and high altitude areas. The RCR observed was 0.39 for the high input technology system. The computed gross margin amounted to more than US $2000 per ha, mostly from large estate crops. Currently, tea is experiencing falling prices.

Paprika
The RCR was 0.26-0.29 in the high input system and it was 0.19 in the low input technology system. The gross margins observed were US $2000 and $1300 per ha for high and low input systems, respectively. It was noted that paprika cannot replace tobacco due to limited market and demand, but it reduces burden.

Macadamia
Macadamia is a high value nut, which costs US $8 to 11 per kg on the world market. The RCR was 0.13 for the high input technology system and the gross margin was US $1000 per ha for saleable nut (at 30 percent after processing). The major problem with the nut is that the yield for Malawi is still low. Changes in input prices are small due to low inputs applied to the crop.

Maize
The hybrid maize had a RCR of 0.35-0.50 for the high input system. The RCR for Mzuzu and Karonga ADDs was 0.88-1.64. The poorer CEA for the two ADDs is mainly due to high transport costs. For the low input systems, the RCR was 0.42-0.76. For Mzuzu and Karonga ADDs, the value was 1.28-2.30.

The local maize is grown on over 65 percent of land allocated to maize. The RCR was above 1 for all ADDs. There is, therefore, no CEA of the local maize as an export crop. It can, however, be regarded as a good import substitute crop.

Soybeans
The RCRs of this crop were 1.08 and greater. This crop enjoys no CEA. Using research results of high input technology, the RCRs were 0.4-0.82. The major problem of this crop is the low yield in Malawi and low world prices. The crop has CEA as an import substitution crop.

Groundnuts
The variety considered for the study was Chalimbana. The RCR was 0.19-0.24, showing a very strong CEA.

Beans (Phaseolus beans)
The RCR was 0.19-0.53, showing a strong CEA in all ADDs, except in Ngabu where the crop marginally grows.

Cotton
Cotton is grown mainly by smallholder farmers, particularly in Ngabu and Salima. The RCR was 0.16. This is one of the crops with strong CEA and high potential as export crop. The major hindrance is the low producer prices and high input demand.

5.3.3.2 Distortions and Policy Effects

The net policy effect [NPP-NSP or (o)] was observed to be negative for all crops. Overall, government policies tax agriculture since as the gap (NPP-NSP) varies, policies exert different pressures on different commodities. The major source of the disparity is the output price transfer.

The gap between private and social prices is narrower for tobacco and paprika, but at least comparable to world prices. The gap widens significantly for crops such as tea, macadamia, groundnuts, beans, with cotton being worst. Cotton was affected by past government policies.

Input private prices are greater than equivalent social prices and these are influenced by the poor transport and road infrastructure.

The land policy is also one of the major factors affecting CEA in the country. Land is extremely cheap (US $3.3 per year), hence estate producers are not persuaded to allocate the scarce resource efficiently.

5.3.3.3 Nominal Protection Coefficients

The nominal protection coefficients (NPC) were also computed for the various crops. Tobacco and paprika had an NPC closer to 1, i.e., 0.91 and 0.86, respectively. The private prices on tobacco and paprika were between 10 to 15 percent below the social price. For macadamia, tea, and cotton the NPCs were 0.58, 0.44, and 0.40, respectively. The market price of cotton is almost 60 percent below the social price and this is a disincentive to producers.

5.3.4 Conclusion and Implications for Policy and Research

Strong CEA exists in tobacco, paprika, macadamia, tea, cotton, groundnuts, beans, and hybrid maize. Paprika, macadamia, beans, cotton and groundnuts would reduce overdependence on tobacco.

Smallholder farmers (low input systems) use domestic resources in cash crops efficiently. Therefore, government and the private sector must seriously focus their attention on smallholder' bottlenecks, e.g., access to credit.

The net policy effect (NPP-NSP) shows that the output price transfer is the main cause of the gap. Agriculture is still haunted by past policies and low private trader participation. Producers have not yet felt the benefits of market liberalization.

The burden of high input prices may be reduced with improvements in the infrastructure and transport sector.

5.4 Presentation of the Comparative Economic Advantage in Livestock - Dr Charles Mataya

5.4.1 Introduction

The national cattle herd is estimated at 600,000 consisting mainly of Malawi Zebu. The herd has been declining from a high of over one million in 1987. The ratio of cattle to human population is around 1 to 17. However, the ownership in the smallholder sector is confined to less than 10 percent of farming families for cattle. It is estimated that the national dairy herd is 12,000 animals. Smallholders (over 3400) contribute a total of 10,000 animals, of which 5,000 are cows.

Growth of the national cattle herd has been sluggish due to high calf mortality (30-40 percent), long calving interval (approximately 17 months) and high levels of theft.

Livestock, including the dairy industry, contributes about seven percent of gross domestic product (GDP) and 12 percent of total agricultural GDP. Unlike annual field crops and other livestock species, the cost and revenue streams for dairy are spread more evenly throughout the year. However, one of the major limitations encountered in the dairy production is low productivity of cattle. Friesians and Friesians crosses average 8 to 15 liters per day of milk production, while Malawi Zebu average 1 to 3 liters per day.[1]

The smallholder milk producers supply 60 percent of the raw milk in the formal sector and 40 percent is supplied by large-scale producers. Some of the milk is produced and consumed in the informal sector. The informal market has been estimated at 27,000 tons.

In 1997, consumption per capita was estimated at 4.5 kg/capita/year. Per capita consumption for most African countries is 15 kg per year. The Food and Agriculture Organization (FAO)

1 Mwenifumbo and Banda, 1998.

recommends consumption per capita of 200 kg per year. There is, therefore, need for a deliberate intervention and strategy by government and the private sector.

5.4.2 Materials and Methodology

The low input systems were represented by the smallholder zero grazing system and open or free grazing. The zero-grazed animals were recorded at Mikolongwe. The average herd was two milking cows, while the improved herd consisted of four milking cows. For the open grazed cattle, the Mponela Milk Bulking Group was used. The average was three milking cows, and the improved had four milking cows. The high input system was composed of a commercial farm owned by Malawi Dairy Industries (MDI). The estimates were based on a 150-cow herd.[2] The poultry were only restricted to a high input commercial setup of a batch of 35,000 birds.

5.4.3 Results

5.4.3.1 Comparative Economic Advantage for Dairy Cattle

Recent assessments indicate that there is enormous potential in the dairy industry. Keyser (1998) indicated that the dairy sector is fairly efficient in the use of domestic resource costs (DRCs). DRC ratios were found to be between 0.75 and 0.94 for smallholder producers (0.75-0.76 for zero grazing and 0.76-0.94 for open grazing). The DRC value for commercial herds was 0.63.

The DRC values observed for dairy cattle are lower than those observed for crops. The livestock subsector is suffering the effects of past government policies of favoring crops rather than livestock.

5.4.3.2 Comparative Economic Advantage for Poultry

The commercial poultry sector using direct labor had a DRC value of 0.68. Profit per batch was calculated to be MK 264,307.00; the gross margins per unit of variable costs were 0.24 and returns per day (MK/batch) were 1,013.29 as of 1998.

The poultry enterprise is capital intensive. This study was conducted only on the commercial level, but there is a need to study other existing systems of management in order to make valid conclusions on comparative advantage of poultry, especially after removal of import taxes on feeds and raw feed ingredients.

5.4.4 Conclusions and Summary of Livestock Options

Livestock is the smallest of Malawi's agricultural sectors and the analysis suggests that the prospects for further expansion are mixed. Smallholder dairy, for example, is one of the most profitable activities analyzed, but is also expensive and may only be appropriate for a small group of reasonably well-off farmers. Commercial poultry is likewise very expensive, albeit of

[2] Keyser, 1998.

an entirely different order from dairy, and the production method studied here is only feasible for a very large corporate firm. Still, all livestock DRC scores are below 1 (have comparative economic advantage), because the domestic demand for milk and poultry products is strong. It would appear to make good economic sense for Malawi to at least strive for "self-sufficiency" in these products.

Given the constraints in the subsector, there are several steps the government could take to help facilitate livestock production. With respect to smallholder dairy, for example, credit programs aimed specifically at helping with the costs of purchasing improved livestock could be very rewarding. Regionally, dairy farmers in central Malawi, where the open-graze system is used, appear to have much more to gain from the adoption of improved management, and at least in the beginning, it would probably make sense to concentrate extension efforts in this area. In terms of profitability, smallholder dairy farmers appear to enjoy a distinct comparative advantage over commercial production. Indeed, this activity can be very rewarding and one of the greatest benefits of the zero-grazing system is that this offers farmers an acceptable income from only a small area of land. The use of brewers' spent grain and pigeon pea by-products would further improve the CEA for the dairy enterprises in Malawi.

For poultry, it may be possible to promote less capital intensive methods of production than modeled here. A previous attempt to develop smallholder poultry through the Black Australop program proved largely unsuccessful due to poor design and planning, but other means of production are still possible. In neighboring Zambia, for example, urban entrepreneurs now produce most of the poultry consumed in Lusaka and the Copperbelt from just 100 to 300 bird batches. This form of production has not taken off in Malawi, but analysis has shown that this can be highly profitable and a good source of supplemental income. Although it may be difficult to compete with Malawi's large-scale poultry producers at first, it appears that only a small drop in price would render this system unprofitable so that more modest operations might be able to succeed in the long run.

5.5 Plenary Discussion

The plenary session was in the form of comments, questions, clarifications, and general discussion on the topics presented. For purposes of consistency, this section has been subdivided into general, crops, and livestock categories.

5.5.1 General

Question/Comment
There was a general inquiry as to why no action is taken when recommendations are made in Malawi. A national committee was formed last year for action. What has the committee done since then?

Response
One year has indeed since passed since the report on alternatives to tobacco was produced. Here, communication was a problem. The PS organized a task force and this task force conducted meetings. A few crops such as cassava, rice, groundnuts, beans, soybeans, etc., are now targets for support since tobacco and maize have already received enough coverage.

Cassava is more prominent. It was agreed that there is a need to develop a program of action. There is a symposium on technologies of cassava very soon where a large number of people will be involved. So the initiatives are working.

Comment
Land rent is too low. Smallholder land rent is nonexistent. Labor on estates is costed, but not on the estate sector. There is a need to calculate a survival cost, which should be taken into account to make smallholder farming profitable, or just break even.

Question
In practical sense, we have mixed enterprises on a farm, especially on smallholder farms. Are there methodologies that can calculate pooled CEA?

Response
It is achievable because CEA builds upon gross margins. This particular study did not attempt that. There is need to do that so that interrelationships and interdependence of enterprises are considered.

5.5.2 Discussion on Crops

Question
Why does the estate sector not take up macadamia? What is the problem?

Response
Production per hectare is still very low and the gestation period is too long (about 10 years to produce fruits) for farmers to start realizing profit. There are additional problems with processing or value adding. All these frustrate farmers to gain access to the world market.

Question
Cotton prices in Malawi are less than world prices. Why don't the entrepreneurs offer better prices to growers to narrow the price gap?

Response
Previously, exporting cotton was banned in the country. All sales were made to David Whitehead & Sons (DWS). With liberalization, other entrepreneurs are coming into the tobacco trade. Hopefully, the new entrants will start exporting so that the prices offered could approach those on the world market.

Question
DWS is importing cotton and yet the country is growing cotton. Why?

Response
The cotton produced in the country now may be of poor quality. However, trade has been liberalized, so anybody is free to import.

5.5.3 Discussion on Livestock

Question
What are the potential yields of milk for Malawi Zebu and Friesian crosses?

Response
With good management, Friesian crosses would produce 15 to 20 liters a day and Malawi Zebu would produce 2 to 6 liters. The yield ranges depend on individual animals and a host of other factors.

Question
It would appear that milk-bulking groups sale their milk in bulk. Have there been attempts or efforts to assist farmers to process?

Response
The 1994 Agricultural Strategy and Action Plan (ALDSAP) mentioned the establishment of microdairies or rural dairy processing to cater for value adding within the milk-shed areas as well as in areas outside the current milk sheds. During the 1999 MASIP exercise, this was further strategized and now it has been taken up by Land 'O' Lakes and the Department of Animal Health and Industry (DAHI). So there is an attempt.

Question
The presentation on livestock dwelt on poultry and dairy only. Are there studies on beef? Meat production is low. What is happening with meat production?

Response
The beef cattle official off-take rate is 10 percent, but it may have gone up to 20 to 25 percent due to indiscriminate slaughter because of wholesale liberalization and rampant theft in the country. This has even led to the decrease in cattle numbers from over one million in 1987 to under 0.5 million today.

Question
Are there strategies in place to improve meat production?

Response
Yes. These include improvement in breeding facilities and multiplication of more livestock through involvement of the private sector in proper importation of livestock and semen as well as taking over government farms. However, the privatization process must be guided so that the farms are used for livestock production. Credit needs to be established to support this private sector. Press Agriculture should also diversify their farming to include livestock multiplication and production on their farms. These strategies are in the 1999 MASIP report and should be implemented.

Question
These days, you do not find meat along the roads. Do your figures on meat production match those of consumption? When did we have the last livestock census?

Response
The figures do not really match. There are still ungazetted slaughters that are not recorded. DAHI is trying hard to remove these. If you do not see meat along the road, it is the efforts of DAHI to allow slaughters in approved slaughter slabs and protect both the public from health hazards and the animals from theft. The last census based on head count was done in 1998 in preparation for the master plan, but it is an annual exercise. The problem is that there is no reliable livestock production data available due to lack of monitoring and evaluation functions.

Question
How much meat is imported?

Response
According to the National Livestock Development Master Plan, Malawi imports a small amount of meat to cover the deficit of 14,000 tons. Actually, during 1999-2000, red meat importation was estimated at only 1608 tons due to some veterinary restrictions on meat importation for disease control purposes.

CHAPTER 6.
GROUP DISCUSSION REPORTS ON COMPARATIVE ADVANTAGE

The two groups noted that all recommendations made on crops and livestock subsectors are still valid. The groups, however, made some observations on each of the recommendations as follows.

6.1 Recommendations on Crops

Recommendation 1: More efficient and effective participation of the private sector. The group noted that there is progress in private sector participation, albeit at a slow pace, so more needs to be done. Market information provided by the Ministry of Agriculture and Irrigation (MoAI), for example, has been discontinued and road and market infrastructure is still poor. Moving forward, there is need for civic education, with MoAI in the forefront, in collaboration with the Ministry of Commerce and Industry (MCI) and supported by the private sector through MCCCI.

Recommendation 2: Formation of associations/cooperatives. Efforts are being made to form product/producer associations such as the Paprika Association and Dhall Millers Association. However, more needs to be done. Associations assist in achieving economies of scale. As a way forward, there is a need to encourage formation of more associations. These associations should be empowered financially and through assistance with capacity building. MCI, though their cooperative sections, should take charge of this recommendation.

Recommendation 3: Local agro-processing and increases in production. It has been noted that the private sector, through a Malaysian company, is establishing processing facilities for soybeans. Noting that the yields of soybeans are still very low, the group recommended that there is a need to encourage improvement in productivity through seed inoculation and irrigation. More processors should be encouraged to participate. The MoAI research and extension departments should take control of this recommendation. Continued and aggressive searches for regional export markets should be conducted through MEPC and NASFAM.

Recommendation 4: Need for regional integration in trade. The groups noted the progress being made on regional integration initiatives such as the SADC Trade Protocol and the Bilateral Trade Agreements (BTAs). The MCI should continue spearheading the initiatives.

Recommendation 5: Intensification of production of alternatives to tobacco. Progress was noted on some crops such as paprika and pulses but more needs to be done on other crops. There is need to intensify processing to encourage value adding. The private sector should take the lead through MCCCI.

Recommendation 6: Improvements in road/market infrastructure and transport at national and regional level. The groups noted moves made by the government by setting up the National Road Agency (NRA) to maintain national roads. Also regional protocols on transport should be accelerated in order to harmonize documentation procedures at borders.

The Ministry of Transport and Public Works, in consultation with RTOA of Malawi, should pursue this recommendation

.

Recommendation 7: Establish/Determine land market or correct land rent. It was noted that land reform moves are being made by the government. However, the land policy should be refined to take into account its economic value. The Ministry of Lands, in collaboration with MoAI, should take the lead.

.

Recommendation 8: Investment in market research for national, regional and international. The groups recommended that MEPC, MCI, MCCCI and APRU should be the institutions that should take the lead in investigating in market research.

6.2 Recommendations on Livestock

6.2.1 Dairy

The group made the following observations regarding the livestock sector, particularly dairy:

1. To change the last sentence of the first paragraph to read "strive for increased production and commercialization" **and not** for 'self-sufficiency'.
2. Initiatives to form cooperatives need to be continued. There should be drastic improvement in livestock management, particularly continued establishment of livestock improvement programs.
3. For the way forward: intensify breeding stock multiplication programs for all livestock species, particularly dairy cattle. The private sector should take charge in collaboration with DAHI.
4. Privatization of the livestock industry should be guided.
5. Special credit facilities should be established to assist farmers and the private sector to participate in livestock production and product value adding.

6.2.2 Poultry

The groups noted efforts being made in urban poultry in Malawi, particularly in city assembly-approved areas. There have been tax reductions on poultry feeds and imported raw feed ingredients. This may be an indication of poultry industry expansion due to tax removals.

As a way forward, tax reduction initiatives should continue to make industry more competitive and allow more private and on-farm feed mixing and production. MCI, in collaboration with MRA, should look into this. Also, the Poultry Industry Association of Malawi (PIAM) should actively continue lobbying with the government on the issue.

6.2.3 General Recommendations for the Livestock Subsector

The groups made further recommendation on livestock production in general, particularly because of the many constraints affecting livestock and due to the current pathetic performance of the industry:

1. Further in-depth research on CEA on all livestock species in all agro-ecological zones and production systems is required to make recommendations for the whole subsector.
2. There is need for drastic change in institutional leadership in the livestock industry (Change current structure or harmonize the two sections of DAHI).
3. As a further way forward, APRU in collaboration with Animal Science Department at Bunda College, should take up the initiatives recommended here with the appropriate officials.
4. Privatization of the livestock industry should be guided.
5. Special credit facilities should be established to assist farmers and the private sector to participate in livestock production and product value adding.

CHAPTER 7.
WORKSHOP RECOMMENDATIONS AND PLAN OF ACTION

After group discussion, the workshop made several recommendations on both crops and livestock according to emerging issues. A plan of action with an indicative timeframe as well as means of verification was drawn up. These are summarized as workshop recommendations and are presented in Table 1 and Table 2.

Table 1. Summary of Major Issues, Recommendations, Action Plan and Monitoring Made by the Groups during Group Discussions on Crops

ISSUE(S)	RECOMMEND-ATIONS	AGENCY	ACTION	TIMEFRAME	ASSUMPTION	MEANS OF MONITORING
Low private sector participation	Private sector to be involved in input procurement and supply	MOAI MCCCI	Open Tender	Six month before distribution	Starter pack will continue	Newspaper adverts
Lack of market information	Establish business information bureau	MOAI & MEPC	Project proposal for funding Form task force	As soon as possible	Donor willing to support the idea Demand for information	Proposal document
Poor market infrastructure • Transport	Rural Road Network Development and Maintenance master plan	NRA MoW/DAs	Task force	As soon as possible	NRA's approval	Master plan
• Storage	Establish cooling center and vending spaces	DAs & CA/MCI	Proposal	As soon as possible	Government approval Funds permitting	Proposal document
Lack of CEA on some commodities important to Malawi	Promote value-adding	Private sector MOAI MIRTDC/MEPC/ NASFAM	Remove duties and surtax for agro-processing equipment	As soon as possible	Government willingness to remove the taxes	• Media • Government gazette
Trade barrier in food security	Harmonization of policies within the region with respect to food security	MCI MOAI ADMARC	Review and re-negotiate bilateral trade agreements	As soon as possible	Willingness of neighboring countries to adjust their positions	• Publisher • Trade protocols • Statistics on trade flows

ISSUE(S)	RECOMMEND-ATIONS	AGENCY	ACTION	TIMEFRAME	ASSUMPTION	MEANS OF MONITORING
Too much dependency on tobacco	Promote alternatives such as rice, cassava, cotton, sugar, pigeon peas, g/nuts and horticultural crops, beans	MOAI Private Sector Financiers MCCCI	Create awareness	As soon as possible	Farmers willing to change farmers practical attitude Inputs readily available Marketing systems develop credit packages Government policies and strategies are in place.	Production statistics
Inefficient land use	Market strategy of subleasing land profitably	Ministry of Lands and Evaluation MOAI Private Sector	Land act to be changed to suit the recommendation	As soon as possible	New land policy is finalized • Willingness to sublease • Buoyant economy	The land act

Table 2. Summary of Major Issues, Recommendations, Action Plan and Monitoring Made by the Groups During Group Discussions on Livestock

ISSUE(S)	RECOMMEND-ATION	AGENCY	ACTION	TIMEFRAME	ASSUMPTION	MEANS OF MONITORING
Inadequate stock of animals and supply of processed products	• Intensify extension • Intensify management and establishment of pastures • Establish credit programs to support acquisition of livestock. • Removal of duties and surtax on feed ingredients and equipment.	DAHI Private Sector Financiers	Training Legislature reviews	As soon as possible	Financiers willing • Farmers changing attitudes • Government willing to remove taxes	• Production statistics • Number of loans issued to farmers • The Tariff brook
Inadequate supply of poultry products	• Encourage private sector to engage in hatcheries and value-adding facilities • Local feed manufacturing • Surtax removal	• Private sector • PIAM	• Review the Act • Business profile	As soon as possible	• Private sector willing • Government willingness and commitment	• Government gazette • Production statistics

APPENDICES

APPENDIX A.
LIST OF PARTICIPANTS

	NAME	TITLE	ADDRESS
1.	M.M. Thondolo	Lecturer in Economics	Chancellor College, P.O. Box 280, Zomba. Tel. 524 222/912 615; Fax. 525 021.
2.	Munday S. Makoko	Program Officer	UNDP, P.O. Box 30135, Lilongwe. Tel. 724 228; Fax. 773 637. E-mail: munday.makoko@undp.org
3.	Josephy Lloyd Dzanja	Projects Officer	Malawi Development Corporation, P.O. Box 566, Blantyre. Tel. 620 100/912 691; Fax: 623 085/620 584. E-mail: MDCGM@Malawi.net or Joseph_Dzanja@yahoo.co.uk
4.	L.F. Golosi	Commissioner	National Statistical Office, P.O. Box 333, Zomba. E-mail: nsolib@malawi.net. Fax: 525 130; Tel: 524 377.
5.	Richard Kachule	Research Fellow	APRU – Bunda College of Agriculture, P.O. Box 219, Lilongwe. Tel: 277 433/835 562; Fax: 277 286. E-mail: richard@APRU1.malawi.net
6.	Grandford C. Banda	Senior Marketing Officer(Research)	Malawi Export Promotion Council, P.O. Box 1299, Blantyre. Tel: 620 499; Fax: 635 429. E-mail: MEPCO@MALAWI.NET
7.	Franklin Simtowe	Research Fellow	APRU – Bunda College of Agriculture, P.O. Box 219, Lilongwe. E-mail: F.Simtowe@APRU1.Malawi.net
8.	Boniface P. Chikabadwa	Divisional Agricultural Extension Officer	Lilongwe A.D.D. P.O. Box 259, Lilongwe. Tel: 756 171 and 770 307 (H)
9.	C. Mataya	Director	APRU – Bunda College, P.O. Box 219, Lilongwe. Tel: 277 433/277 272; Fax: 277 286.
10.	James W. Banda	Associate Professor	Bunda College, P.O. Box 219, Lilongwe. Fax: 277 286/277 403/277 364/277 251; E-mail: jwbanda@chirunga.sdnp.org.mw
11.	T.O. Nakhumwa	Research Fellow	APRU – Bunda College of Agriculture, P.O. Box 219, Lilongwe. Tel: 277 433; Fax: 277 433
12.	Frank Ngaiyambe	Document Specialist	APRU – Bunda College of Agriculture, P.O. Box 219, Lilongwe. Tel: 277 433; Fax: 277 286

APPENDIX B.
WORKSHOP PROGRAM

Wednesday, 23rd August, 2000

Afternoon	Arrival of Participants Registration of Participants

Thursday, 24th August, 2000

800-900	Registration of Participants
SESSION 1:	**OPENING SESSION** **Chairman: Dr J.W. Banda** **Rapporteur: Mr. M. S. Makoko**
900-1000	Introduction of Participants Welcome Remarks by Workshop Chairman, *Dr. J. W. Banda* Welcome Remarks and Opening Address by APRU Director, *Dr. C. S. Mataya*
1030-1100	Presentation of Workshop Objectives - *Dr. C. S. Mataya*
1000-1030	GROUP PHOTOGRAPH COFFEE/TEA BREAK
SESSION 2:	**INFORMAL CROSS-BORDER TRADE IN MALAWI**
1030 -1200	Presentation of Major Comments, Recommendations and the Way Forward for the Study on Informal Cross-Border Trade in Malawi - *Dr. C. S. Mataya*
1200-1230	DISCUSSION
SESSION 3:	**AGRICULTURAL COMPARATIVE ADVANTAGE** **Chairman: Mr. M.S. Makoko** **Rapporteur: Dr. J.W. Banda**
1400-1500	Presentation on the Main findings and Recommendations of the Malawi Study: "Crops" - *Mr. T. O. Nakhumwa*
1500-1530	Presentation on the Main Findings and Recommendations of the Malawi Study: "Livestock" - *Dr. C. S. Mataya*

1530-1600	TEA/COFFEE BREAK
1600-1700	GROUP DISCUSSION Briefing and Formation of Discussion Groups

Friday, 25th August, 2000

SESSION 4:	**GROUP DISCUSSIONS AND RECOMMENDATIONS**
0900-1230	Group Discussions and Production of Group Reports
1330 - 1400	Group Report Presentation: Group 1: *"CROPS"*
1400-1430	Discussion and Refinement of Report
1430-1500	Group Report Presentation: Group 2: *"LIVESTOCK"*
1500-1530	Discussion and Refinement of Report
1530 - 1600	General Recommendations on the Way Forward
SESSION 5:	**CLOSING CEREMONY** **Master of Ceremonies: Dr. J.W. Banda**
1600	Vote of Thanks by Workshop Chairman - *Dr. J.W. Banda*
	Closing Remarks and Speech by APRU Director, *Dr. C. S. Mataya*
1630	DEPARTURES (SOME PARTICIPANTS)

Saturday, 26th August, 2000

Whole Day	Drafting of Report - *Dr. J.W. Banda and Mr. M. S. Makoko* Departure of rest of participants

Sunday, 27th August, 2000

1000	DEPARTURES (REST OF THE GROUP)

APPENDIX C.
ANALYSING COMPARATIVE ADVANTAGE, NAKHUMWA 1995

Summary indicators for activities analyzed (sorted by DRC)

Activity		Sector	DRC	Farmer Return/ha (MK)	Capital/ Labor Transfer (M)	Land Transfer (N)
Maize Hybrid	Import parity	High input estate	0.16	640.98	67.00	488.02
Tobacco	export parity	High input estate	0.18	12190.53	411.00	191.9
Tobacco	export parity	Low input estate	0.18	5850.60	386.00	174.00
Maize hybrid	Import parity	Smallholder	0.18	234.22	3.00	174.00
Cotton	export parity	Smallholder	0.19	31.94	0.00	175.00
Soya beans	Import parity	Low input estate	0.19	786.62	55.00	174.00
Sorghum	Import parity	Low input estate	0.19	391.76	100.00	174.00
Cotton	export parity	High input estate	0.20	476.96	60.00	192.00
Soybeans	Import parity	Smallholder	0.22	79.09	0.00	174.75
Maize local	Import parity	Smallholder	0.24	262.00	00	356.00
Maize Hybrid	Import parity	Low input estate	0.24	118.14	8.0	174.00
Cotton	export parity	Low input estate	0.26	61.88	108.00	174.00
Soya beans	Import parity	High input estate	0.26	391.66	22.00	191.90
Sorghum	Import parity	High input estate	0.28	626.44	42.00	191.90
Groundnuts	export parity	Smallholder	0.35	304.92	0.86	425.00
Soybeans	export parity	Low input estate	0.37	61.88	55.00	174.00
Sorghum	Import parity	Smallholder	0.38	74.00	0.00	425.00
Groundnuts	Export parity	High input estate	0.41	63.38	193.00	191.90
Soybeans	Export parity	Smallholder	0.43	79.09	0.00	174.74
Soybeans	Export parity	High input estate	0.56	391.66	22.00	191.90
Sorghum	Export parity	Low input estate	0.65	391.76	100	174.00

Activity		Sector	DRC	Farmer Return/ha (MK)	Capital/ Labor Transfer (M)	Land Transfer (N)
Groundnuts	Export parity	Low input estate	0.71	63.38	170.00	174.00
Maize hybrid	Export parity	Smallholder	0.77	234.22	3.75	174.75
Maize hybrid	Export parity	High input estate	0.79	640.98	167.00	488.02
Maize local	Export parity	Smallholder	0.81	262.00	0.00	356.00
Maize hybrid	Export parity	Low input estate	1.04	118.14	68.00	174.00
Sorghum	export parity	Smallholder	1.19	74.00	0.00	425.00
Sorghum	export parity	High input estate	1.31	626.44	42.00	191.90

The table above gives a summary of indicators for activities analyzed and sorted by domestic cost resource ratios.

1. Maize

Comparative Advantage

The DRC coefficients for both import and export scenarios were computed using the international market. Given the high cost of transport for maize overseas and also the low maize prices on the world market, the DRC ratios are unimpressive for the export scenario. Nevertheless, computations on regional exports could give fairly improved results i.e., lower DRCs as transport costs are reduced. In the case of estates (low and high inputs) export scenario, the DRCs are quite high, 1.04 and 0.79 respectively. The DRC ratios above value of one suggest that under normal circumstances Malawi should not seek to produce maize for export as it would use more resources than the value of foreign exchange that would be earned. However when grown as an import substitution crop, the DRCs for maize are quite impressive for both low and high input technologies. The DRC ratios are 0.24 and 0.16 respectively.

Market Potential

There is little potential for exports because the export market is limited to neighboring countries where transport costs are relatively low. A further problem with maize is that almost all countries in the sub-Saharan region have self-sufficiency policies in place, maize being the dominant targeted crop. It is not feasible to export maize outside this region due to high transport costs. The domestic demand for maize will, however, continue to rise.

2. Sorghum

Comparative Advantage

The DRC coefficients were computed both for the import and export parity scenarios. The DRC coefficients of 0.65 for low input estates, though high are better compared to 1.31 for the high input estates and 1.19 for smallholder estates.

The major constraint to improved DRC results for this crop is mainly the low prices at both international and domestic markets. However, using the import scenario, the DRCs for the low input, high input estates, and the smallholder subsector are 0.19, 0.28 and 0.38, respectively. The crop, therefore, is promoted as an import substitution crop.

Market Potential

Although producer prices have improved over the past years, the prices are still too low to induce increased production. The international price for sorghum is insufficient to encourage production for export.

3. Cotton

Comparative Advantage

The DRC coefficients have been constructed for low and high input estates and the smallholder subsector for cotton. The DRC coefficients for low input, high input, and smallholder are 0.26, 0.20 and 0.19, respectively. The results indicate a strong comparative advantage in this crop for Malawi using the export parity measures as a benchmark. The comparative advantage for Malawi cotton as an export crop would be stronger if production improved.

Market Prospects

A very small portion of raw cotton is exported due to the declining cotton production and due to the fact that exports are increasingly in the form of textiles. Nevertheless, Malawi cotton is of high quality, such that if supported the export market can easily be revived (Jansen and Hayes, 1994). This crop demands a high level of inputs especially chemicals. The removal of sales tax would lead to reduction in production cost and increase revenue.

APPENDIX D.
DEVELOPMENT OF AGRICULTURAL ALTERNATIVES TO TOBACCO PRODUCTION AND EXPORT
(Power Point Presentation)

DEVELOPMENT OF AGRICULTURAL ALTERNATIVES TO TOBACCO PRODUCTION AND EXPORT

Proposals for Future Directions

by

Charles Mataya and Ernest Tsonga

United Nations Development Program (UNDP)

Lilongwe, Malawi

Oct, 1999

1. Government Policies and Goals

Poverty Alleviation, Policies Target the Following Objectives

- Food security and nutrition;
- Self-reliance through increased road-based small agro-industries and businesses;
- Expanding and diversifying exports of crops and livestock products; and

- **Raising farm incomes and promoting economic growth while conserving natural resources.**

It is envisaged that these objectives will be achieved by:

- **sustainable use of natural resources;**
- **balanced distribution of crops and livestock; and**
- **reducing overdependence on volatile external trade flows.**

This has raised some questions on growth and income distribution such as:

- **Which subsectors of agriculture should the government encourage?**
- **What are the most important policy tools to use?**
- **To what extent should government policies be targeted at either the most productive farmers or at the broad mass of farmers?**

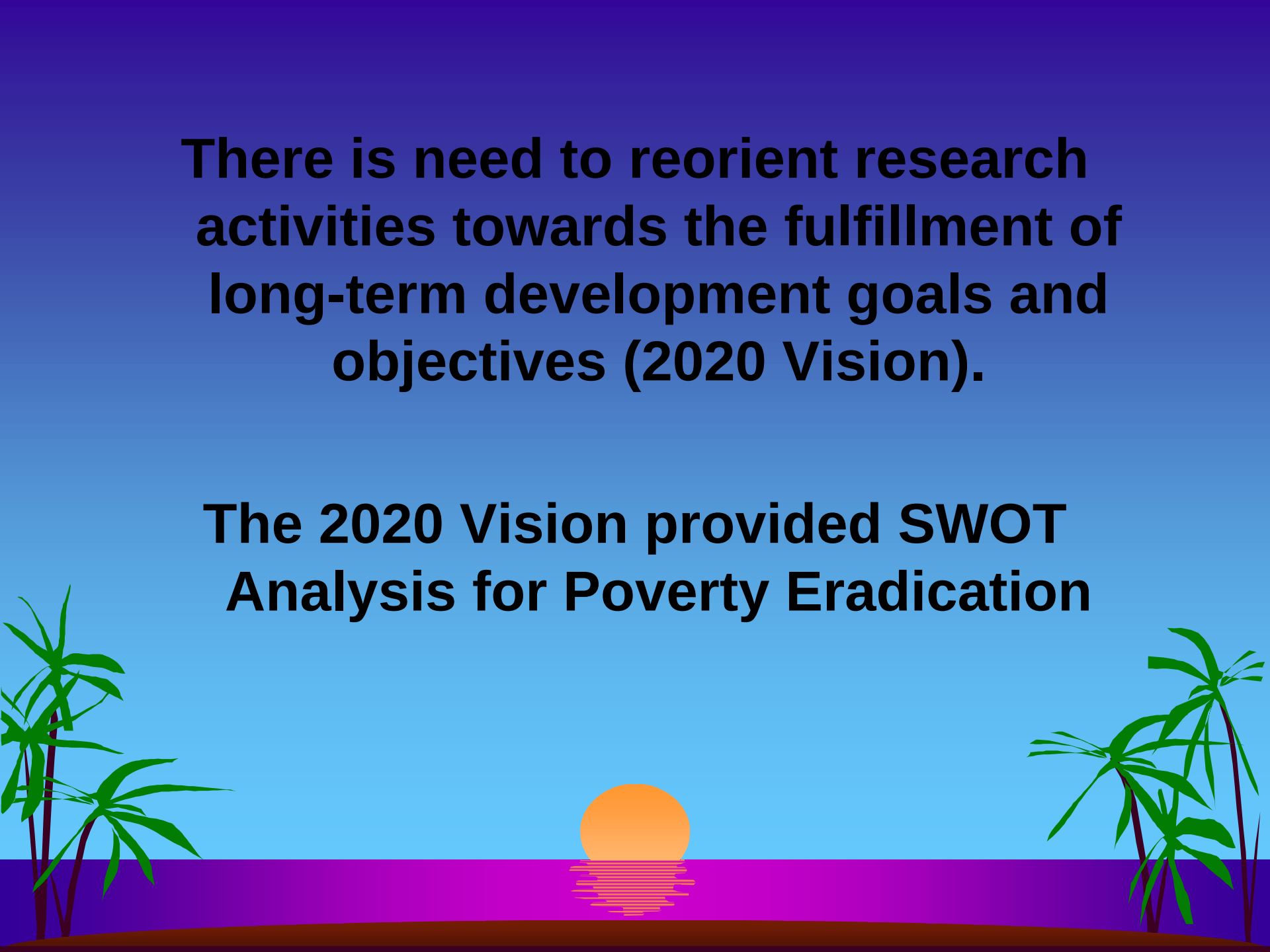
Demand-driven policy-oriented research is key to providing some answers to these questions.

In spite of a series of policy initiatives and interventions for the past three decades:

- **More than 60 percent of the population live below the poverty line.**
- **Policy interventions are inefficient due to weak human resource and technical capacity.**
- **Most poverty reduction strategies and programs have been based on a narrow horizon that does not allow for the full effects of policy to be realized.**

There is need to reorient research activities towards the fulfillment of long-term development goals and objectives (2020 Vision).

The 2020 Vision provided SWOT Analysis for Poverty Eradication



2. Background on Malawi's Economy

Malawi's economy is predominantly dependent on the production of primary agricultural commodities.

- **Over 80% of the labor force is employed in the smallholder subsector.**
- **Approximately 11% are employed in the estate subsector and also contribute 35% to GDP.**
- **The smallholder subsector contributes 65% to the agricultural GDP and the remainder 35% is contributed by the estate sector.**

- Crops account for 91% of agricultural output.
- Livestock account for 7%.
- Fisheries and forestry account for less than 1% (World Bank, 1995).
- Agriculture contributes approximately 90% to foreign exchange earnings with tobacco accounting for more than 65%, tea 8%, and sugar 7%.

- **The sustainability of Malawi's economy crucially depends on the management of the environment and natural resources.**
- **The rapid increase in human population in the last three decades has exerted tremendous pressure on the ecosystem.**
- **Malawi is densely populated: 87 persons per km^2 of total surface land and 171 persons per km^2 of arable land.**

Implications of this high density:

- 72% of smallholders cultivate less than 1 ha and 41% cultivate less than 0.5 ha (NSO, 1992).
- Average size of land cultivated by household category holding is less than 0.5 ha class is a bare 0.28 ha.
- Only 6% of the households cultivate greater than 2 ha.
- Women-headed households cultivate even less than the national average, which is estimated at 0.63 ha.
- Due to input credit and technology constraints, households with 0.5 to 1 ha produce 40-70% of their staple requirements.

3. Extent of Poverty

- Average income of $132 per annum.
- Over 50% of population live below the poverty line, which is estimated at $40/adult.
- National mean expenditure (1995) was $189 and median (50th percentile) expenditure was $104 at 1990-1991 exchange rates (World Bank).
- Gini Coefficient: 0.62, highest among 13 African countries.

Among the major factors widening the gap between poor and rich households include:

- Differences in resource endowment, access to credit, use of technology and resultant productivity.
- Government policies that have tended to favor the development of large-scale farming at the expense of small-scale agriculture.

4. Establishment of APRU

APRU was established at Bunda with USAID/ASAP support for the simple reason that:

- **Policy analysis is most credible if it is undertaken by an independent unit.**

Mandate of APRU: To conduct objective, independent, and demand-driven agricultural policy research with a view of enhancing the performance of the agricultural sector in the country.

At inception, APRU's mission was 'to act as a facility for:

- **collaborative research,**
- **consultancy,**
- **training, and**
- **outreach**

  in search for innovative policies towards the promotion and transformation of agriculture and rural development in the country.

Since 1994, APRU has conducted research in both agricultural and natural resources at the request of clients, particularly, government, NGOs, and other international organizations.

APRU's commissioned work has to some extent generated information and contributed to dialogue on key policy issues.

Major outputs include studies on:

- informal cross-border trade,
- comparative economic advantage,
- privatization of small-scale irrigation schemes, and
- food security and natural resource management.

However, APRU has never had a strategic plan to give it direction, vision, nor to indicate strategies and action plans for implementation during and after the project period.

Other Critical Problems

- Inability to effectively deliver its services at national, regional, and international levels.
- Poor dissemination of research findings to current and potential stakeholders, except in most cases, to the designated clients.
- Limited capacity with respect to both numbers and expertise, particularly amongst the research staff.

- **Cessation of funding by USAID without a programmatic strategy left the unit in limbo.**
- **Although research agenda was developed at inception, inadequate planning seems to have eroded smooth operations and undermined expected goals and objectives.**

In view of both these problems, it was felt that APRU should develop a strategic plan stating its direction, vision, strategies, and action plans consistent with the dynamic economic situation, particularly in the agricultural sector.

5. Financial Status of APRU

- Upon phasing out of the project funding in September 1998, the University of Malawi agreed to assume financial obligations on overhead costs such as staff salaries, housing, and medical costs.
- APRU has financial obligations with respect to maintenance and replacement of its fleet of vehicles, computer equipment, other electronic appliances, and office supplies.

In preparation of the transition from full financial support by USAID to partial funding by the University of Malawi, it was felt necessary to explore alternative ways through which APRU would generate its own income.

The process of identifying mechanisms for long-term financial sustainability is thus an integral part of the strategic plan.

6. Development of a Strategic Plan

The 5-year strategic plan (1994-2004) was developed through a participatory process which involved different stakeholders that were drawn from various institutions, including

- **The Ministry of Agriculture and Irrigation (MoAI)**
- **National Economic Council (NEC)**
- **National Research Council of Malawi (NRCM)**
- **Farmer representatives, the Ministry of Lands**
- **Housing and Physical Planning, the Malawi Polytechnic Center for Social Research (CSR)**
- **Bunda College of Agriculture**
- **USAID, UNDP**
- **Media (Malawi Broadcasting Corporation)**

- **The UNDP extended its financial support towards development of the strategic plan through the MoAI.**
- **Deliberations of the consultative meetings focused on the development/modification of the original mission statement and the development of a vision statement which was not in the earlier version.**
- **The goals, objectives, strategies, and action plans for each of the major areas/sections under APRU as well as log-frames were developed.**

Vision Statement

In order to reflect the current and future direction of APRU and the country's Vision 2020 in view of the poverty alleviation policy, the following vision statement was developed:

By the Year 2004, APRU shall be a center of excellence in conducting demand-driven policy-oriented research, consultancy and outreach activities in agriculture, natural resources, and environment in Malawi.

Mission Statement

To achieve APRU's vision, the mission statement was revised as follows:

To Facilitate And Conduct Collaborative Research, Consultancy And Outreach Activities For Policy Analysis And Formulation Towards The Promotion Of Sustainable Development Of Agriculture And The Management Of Natural Resources And Environment In Malawi.